

**PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:  
Russell J. Apfel

Serial No.: 09/778,291

Filed: February 6, 2001

For: METHOD AND APPARATUS FOR  
IMPROVING GAIN BANDWIDTH  
PATHS

Group Art Unit: 2665

Examiner: DANIEL J. RYMAN

Atty. Dkt. No.: 2069.008800/TT3778

CUSTOMER NO. 23720

**REQUEST FOR REHEARING AFTER BOARD'S DECISION**

**MAIL STOP APPEAL BRIEF- PATENTS**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

On January 17, 2007, the Board of Patent Appeals and Interferences issued a Decision on Appeal. Appellant hereby responds by filing a Request for Rehearing pursuant to 37 C.F.R. 41.52 within two-months of the date of the Decision on Appeal. This paper is being filed on Monday, March 19, 2007 (since March 17, 2007 falls on a Saturday), therefore, it is timely filed.

Appellant respectfully requests that the Board reconsider the previous affirmation of the Examiner's argument based on at least the following reasons.

Although the Board has provided well thought-out and well-reasoned arguments as to the affirmation of the Examiner's arguments, there still remain a few points that Appellant respectfully asserts that the Board inadvertently misapprehended and/or overlooked.

Accordingly, Appellant respectfully requests that the Board consider these points and grant this Request for Rehearing and vacate the previous ruling.

Appellant respectfully requests that the Board reconsider its interpretation of the signal gain disclosed by *Shenoi* to compensate for attenuation caused by 6,000 ft. of cable at 27 Khz. The Board focused on the disclosure in column 8, lines 3-24 and Figure 4 of *Shenoi* to find the gain adjustment of claims of the present invention. However, Appellant respectfully requests that the Board consider the following.

*Shenoi* discloses compensating for attenuation caused by 6,000 ft. of cable. However, *Shenoi* is actually directed at filtering a signal and applying a predetermined gain to counteract the attenuation caused by the 6000 ft. of cable. The Board argued that this equates to gain control based upon a characteristic, *i.e.*, a cable attenuation characteristic of the frequency bandwidth for each channel. However, *Shenoi* is not disclosing a gain control; instead it is merely applying a predetermined amplification of a signal. Based upon the attenuation of the 6,000 ft of cable at 27 kHz, *Shenoi* merely applies a predetermined gain after filtering at a bandpass of 10 kHz. to 44 kHz. *Shenoi* does not disclose monitoring of the signal, as called for by claims of the present invention. *Shenoi* merely injects an attenuation based upon the fact that a 6,000 ft. of cable is being used. In contrast, claims of the present invention call for performing the gain bandwidth control process based upon the monitoring of the signal.

Further, *Shenoi* discloses applying the amplification to the entire signal once based upon a 6,000 ft. of cable. In contrast, claims of the present invention call for controlling the gain of a portion of the signal based upon the bandwidth requirement of a signal path. Therefore, *Shenoi* clearly does not anticipate or make obvious the gain/bandwidth control process as claimed in the

claims of the present invention. Further, *Shapiro* also does not disclose monitoring the signal and performing a gain/bandwidth control process. *Shapiro* merely provides a table which includes communications channel listing and respective number of bits to be loaded onto each channel in the table. *Shapiro* does not make obvious controlling the gain for at least the portion of the signal based upon the bandwidth requirement, as called for by claims of the present invention. Therefore, neither *Shapiro* or *Shenoi*, or their combination, disclose or make obvious the subject matter of the gain/bandwidth control process called for by claims of the present invention. Therefore, the Board is respectfully requested to consider these positions and grant this Request for Rehearing and vacate the prior decision affirming the Examiner's position.

Further, regarding Group II claims, Appellant respectfully asserts that the Board reconsider its position that various elements, such as separating the signal path in response to the approximate length of the signal path, is disclosed by *Shenoi*, *Shapiro* or their combination. The Board asserted that, at the very least, the element of separation of signal path is disclosed by *Shenoi* because of its disclosure of the downstream and upstream paths. However, Appellant respectfully asserts that *Shenoi* actually performs no such separation. *Shenoi* merely discloses predetermined downstream and upstream paths selected for communication, but does not actually perform the separation of signal paths in response to a proximate length of signal path. In other words, *Shenoi* does not disclose separating the signal to downstream and upstream paths based upon the approximate length of the signal path. Therefore, Group II claims in *Shapiro* do not make up for this deficit. Therefore, Group II claims are also not taught, disclosed or made obvious by *Shenoi*, *Shapiro*, or their combination.

Therefore, Appellant respectfully requests that the Board grant this Request for Rehearing and reverse the prior decision affirming the Examiner's positions.

Respectfully submitted,

WILLIAMS, MORGAN & AMERSON, P.C.  
CUSTOMER NO. 23720

Date: March 19, 2007

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